

FACT SHEET FOR NPDES PERMIT WA 0039641

FACILITY NAME: Mint Farm Generation, LLC

SUMMARY

Mint Farm Generation, LLC is a proposed 298 MW natural gas-fired turbine, combined cycle power generation facility, located at the Mint Farm Industrial Park in Longview, Washington. This facility will use cooling water from the Columbia River, provided by the Weyerhaeuser Longview Facility, and will discharge to the Columbia River via Weyerhaeuser's outfall. Mint Farm Generation, LLC may also use groundwater obtained from on-site groundwater wells owned by Mint Farm Generation, LLC.

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) permits, which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Mint Farm Generation, LLC c/o Mirant Corporation 1155 Perimeter Center West Atlanta, Georgia 30338-5416
Facility Name and Address	Mint Farm Generation, LLC P.O. Box 1400 Longview, Washington 98632
Type of Facility	298 MW Combined Cycle Power Plant
SIC Code	4911
Discharge Locations	Outfall 001/002: Columbia River, river mile 63.5: Latitude: 46° 7' 50" N, Longitude: 122° 59' 27" W. Outfall 003: Stormwater Discharge to Mint Farm Industrial Park Stormwater System
Water Body ID Number	WA-CR-1010

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The Mint Farm Generation, LLC is a nominal 298 megawatt (MW) natural gas-fired, combined-cycle power plant to be located at the Mint Farm Industrial Park in Longview, Washington. The project is currently at an advanced stage of development. It is believed that approximately 15 months of work remains to achieve commercial operation.

Several contracts and permits have been achieved to enable the project to attain its advanced development stage. An air permit for a 298 MW facility has been issued by the Southwest Clean Air Agency.

Mint Farm Generation, LLC plans to construct, operate and maintain a 298 MW natural gas-fired combined-cycle electric generating plant with closed-cycle cooling at the Mint Farm Industrial Park in Longview, Washington. Mint Farm Generation, LLC purchased the Mint Farm Property and development rights from Avista Power, LLC in 2001. A SEPA checklist and Environmental Assessment were prepared for the property and industrial process under Avista ownership.

INDUSTRIAL PROCESS

Mint Farm will be a year-round, base-load electric generation facility that is expected to commence commercial operation in July 200X and has an expected life of approximately 25 to 30 years.

The main industrial process at the Mint Farm facility will be the conversion of natural gas fuel to electricity. Natural gas will be burned in a combustion turbine that will drive an electric generator. The combustion turbine exhaust will flow through a heat recovery steam generator (HRSG) producing high temperature, high-pressure steam. The steam will be delivered to a steam turbine where it will drive a second electric generator. Spent steam from the steam turbine will be condensed to allow this high quality water to be recycled. The facility will also include an evaporative cooling tower for cooling the steam condenser.

Primary supply water will be obtained from the nearby Weyerhaeuser Longview mill, specifically Weyerhaeuser's filtered water or Weyerhaeuser Sump B water, which is non-contact once through heat exchanger effluent. Filtered water is cooler than Sump B water, but it is nearly identical from a chemical constituent standpoint. An alternate water source is on-site groundwater wells owned by Mint Farm Generation, LLC.

The supply water will be used as cooling tower make-up, steam generator make-up, and other uses. Process wastewater from the Mint Farm Generation, LLC facility will consist primarily of blowdown from the cooling tower. The flow and chemical constituency of the process wastewater depends primarily on the source water and number of cooling tower concentration cycles used in the generation facility. The treated process wastewater will be discharged to the Weyerhaeuser outfall 001/002 as authorized by NPDES permit number 000012-4.

DISCHARGE OUTFALLS

The discharge outfall will be Weyerhaeuser Longview's 001/002 outfall. BOD loading should be negligible for this wastewater source.

PERMIT STATUS

This is a new permit for a new facility.

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An application for a permit and engineering report was submitted to the Department on July 15, 2002. the project has been on hold, and the project may currently be up for sale.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

This is a new facility, consequently no compliance records are available.

WASTEWATER CHARACTERIZATION

The wastewater characteristics have been evaluated for compliance with state water quality standards. This evaluation assumed that the Mint Farm facility will operate at 10 cooling cycles using Weyerhaeuser's filter water, or at 4 cooling cycles using onsite groundwater. Copper, chromium and zinc were the only metals detected in the source water sampling results. The process should not add other metals. Chromium and zinc do not require dilution to meet water quality standards. The dilutions required for copper are actually achieved within Weyerhaeuser's outfall prior to discharge. The Mint Farm facility flow is less than two percent of Weyerhaeuser's flows. If Weyerhaeuser and all other flows to the outfall were shutdown, the Mint Farm facility discharge would still meet water quality standards.

SEPA COMPLIANCE

Cowlitz County was the lead SEPA agency for this project. SEPA has been complied with for this project.

PROPOSED PERMIT LIMITATIONS

Federal and State regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

DESIGN CRITERIA

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

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The design criteria for this facility are taken from the Engineering Report “cooling Tower Blowdown and Low Volume Waste Discharge to the Weyerhaeuser Outfall diffuser, Mint Farm Generation, LLC, Longview, Washington” prepared by CH2MHILL, July 10, 2002.

Primary supply water will be obtained from the nearby Weyerhaeuser Longview mill, specifically Weyerhaeuser’s filtered water or Weyerhaeuser Sump B water, which is non-contact once through heat exchanger effluent. Filtered water is cooler than Sump B water, but it is nearly identical from a chemical constituent standpoint. An alternate water source is on-site groundwater wells owned by Mint Farm Generation, LLC.

The supply water will be used as cooling tower make-up, steam generator make-up, and other uses. Process wastewater from the Mint Farm Generation, LLC facility will consist primarily of blowdown from the cooling tower. The flow and chemical constituency of the process wastewater depends primarily on the water source, and number of cooling tower concentration cycles used in the generation facility. The Mint Farm Generation, LLC process wastewater will be discharged to the Weyerhaeuser outfall diffuser system, as authorized by a NPDES permit issued by the Washington State Department of Ecology’s Industrial Section.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limits are established in 40 CFR Chapter 1 Part 423. Categorical standards for new sources listed in Subpart 423.15 will apply. The New Source Performance Standards (NSPS) categorical limitations for cooling tower blowdown are listed below.

NSPS Technology-Based Effluent Limits for Cooling Tower Blowdown (Outfall 001/002)

Parameter	Criteria
pH	6.0 to 9.0
PCBs	Discharge prohibited
TSS	100 mg/L max day 30 mg/L 30-day average
Oil and Grease	20 mg/L max day 15 mg/L 30-day average
Free Available Chlorine	0.5 mg/L maximum 0.2 mg/L average
Chromium	0.2 mg/L max day 0.2 mg/L 30-day average
Zinc	1.0 mg/L max day 1.0 mg/L 30-day average
126 Priority Pollutants less chromium and zinc	No detectable amount

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an

individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the State of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. When the natural conditions of a receiving water are of higher quality than the criteria assigned, the existing water quality shall be protected. In this case, pollution of said waters which will reduce the existing water quality shall not be allowed except under conditions allowed in Chapter 173-201A WAC section 070 for antidegradation. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic"

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mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

There is no saltwater intrusion into the Columbia River that reaches as far as mile 63.5. However, the river is tidally influenced. Flood tides cause currents to decelerate and occasionally reverse near high water. Consequently, the Columbia River at mile 63.5 is classified as an estuary for the purposes of defining mixing zones.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

Mint Farm Generation's outfall 001/002 will discharge cooling tower blowdown to the existing effluent discharge line of Weyerhaeuser Longview's 001/002 discharge outfall. Weyerhaeuser Longview has an existing NPDES discharge permit (WA 000012-4) which authorizes a mixing zone.

DESCRIPTION OF THE RECEIVING WATER

The Mint Farm Generation, LLC facility will discharge cooling tower blowdown into an outfall pipeline that will convey the flows to Weyerhaeuser Company's Longview Mill outfall system. Weyerhaeuser Company's Longview Mill discharges wastewater consisting of secondary effluent, filter plant backwash, and non-contact cooling water, through two outfall diffusers into the Columbia river at river mile 63.5, at the western portion of the Weyerhaeuser mill site. The outfalls are parallel and extend at an angle of approximately 35° (relative to the shoreline) into the river. The Weyerhaeuser outfalls were designed and located to provide rapid mixing and high dilutions of effluent into the receiving waters. The Columbia River at Longview is tidally-influenced, and river flows can range from 87,000 cfs (lowest 7Q10 river flow) to over 700,000 cfs (historical maximum).

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

Fecal Coliforms	100 organisms/100 mL maximum geometric mean
Dissolved Oxygen	8 mg/L minimum
Temperature	20 degrees Celsius maximum or incremental increases above background
pH	6.5 to 8.5 standard units
Turbidity	less than 5 NTU above background
Toxics	No toxics in toxic amounts.

States are required under Section 303(d) of the Clean Water Act to compile lists of waters that do not meet water quality standards, and develop plans to bring those waters into compliance. The Columbia River is listed for temperature and dissolved gases. Excess dissolved gases are associated with dams on the river. The Mint Farm facility's effluent will not contribute to an exceedance of dissolved gases. In addition, the Columbia River is listed for the following parameters: WRIA 26- upstream of the mouth of the Cowlitz River: bis(2-ethylhexyl) phthalate; WRIA 25- downstream from the Cowlitz River: 4,4'-DDE, arsenic, bis(2-ethylhexyl)phthalate, PCB-1248, PCB-1254, and PCB-1260. The Mint Farm facility

is expected to contribute no additional loadings of these pollutants. All these parameters will be monitored via the priority pollutant testing required in the permit, which will support the TMDL effort.

The only 303(d) listing relevant to the discharge is for temperature in the Columbia River, which commonly exceeds the 20°C standard during late summer. Planning for a TMDL to address the listed 303(d) pollutants is currently underway.

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Mixing Zones. Pollutant concentrations in the proposed discharge exceed water quality criteria with technology-based controls which the Department has determined to be AKART. The NPDES permit authorizes both acute and chronic mixing zones for the effluent discharge.

Critical Ambient Conditions. Pollutants in an effluent may affect the aquatic environment near the point of discharge (near field) or at a considerable distance from the point of discharge (far field). Toxic pollutants, for example, are near-field pollutants--their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating surface water quality-based effluent limits varies with the point at which the pollutant has its maximum effect.

The derivation of surface water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

The critical discharge condition for the Columbia River near Longview is the seven day average low river flow with a recurrence interval of ten years (7Q10). The critical 7Q10 discharge at this location is estimated at 87,582 cfs.

Temperature-- Temperature is the primary water quality parameter with a potential for impact from the Mint Farm project. Through modeling using UDKHDEN, it was found that the average excess temperature attributable just to the Mint Farm project would be 0.012 °C at the edge of the mixing zone during critical conditions when using filter plant water, and would be 0.054°C when using groundwater. The differences are because the different water sources would result in different volumes of discharge. The modeling also showed that the average excess temperature attributable to the combined Weyerhaeuser and Mint Farm discharges would be 0.24°C at the edge of the mixing zone during critical conditions. This demonstrates the heat from the Mint Farm project is only a small component of the combined discharge. When the Mint Farm project is using the already heated sump B water, it will result in a decrease in the amount of heat released by the combined Weyerhaeuser and Mint Farm discharges because it would replace a volume of warm water being discharged with a smaller volume of water that was comparable to or a little cooler than the sump B water. The excess temperature associated with the Mint Farm project and Weyerhaeuser combined discharge is allowed under the state water quality standards because the excess temperature would not exceed 0.3°C at the mixing zone boundary.

The Columbia River is on the 303(d) list for temperatures that exceed the numeric 20°C component of the temperature standard during late summer. Ecology and EPA have begun the process to develop a Total Maximum Daily Load (TMDL) to bring the Lower Columbia River into compliance with the temperature standard. The results of the TMDL may result in changes to this permit.

pH—Ecology evaluated the impact of the discharge on pH. We determined that compliance with the technology-based effluent limits for pH will ensure compliance with the water quality standard for pH.

Turbidity--The impact of turbidity was evaluated based on the range of turbidity in the effluent and turbidity of the receiving water. Due to the large degree of dilution, it was determined that the turbidity criteria would not be violated outside the designated mixing zone.

Toxic Pollutants--Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the Water Quality Standards for Surface Waters or from having surface water quality-based effluent limits. Toxic chemicals will not be present in the Mint Farm's discharge at concentrations requiring water quality-based effluent limits more stringent than the technology based limits.

WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

The proposed permit contains requirements for whole effluent toxicity testing as authorized by RCW 90.48.520 and 40 CFR 122.44 and in accordance with procedures in Chapter 173-205 WAC. The proposed permit requires the Permittee to conduct toxicity testing for one year in order to characterize both the acute and chronic toxicity of the effluent.

If acute or chronic toxicity is measured during effluent characterization at levels that, in accordance with WAC 173-205-050(2)(a), have a reasonable potential to cause receiving water toxicity, then a limit on the acute or chronic toxicity will be effective in the next permit cycle. The Permittee would be required to conduct WET testing in order to monitor for compliance with either an acute toxicity limit, a chronic toxicity limit, or both an acute and a chronic toxicity limit during the next permit cycle. The permit issued in the next permit cycle will also specify the procedures the Permittee must use to come back into compliance if the limits are exceeded.

Accredited WET testing laboratories have the proper WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC₅₀, EC₅₀, IC₂₅, etc. All accredited labs have been provided the most recent version of the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* which is referenced in the permit. Any Permittee interested in receiving a copy of this publication may call the Ecology Publications Distribution Center 360-407-7472 for a copy. Ecology recommends that Permittees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

When the WET tests during effluent characterization indicate that no reasonable potential exists to cause receiving water toxicity, the Permittee will not be given WET limits and will only be required to retest the

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effluent prior to application for permit renewal in order to demonstrate that toxicity has not increased in the effluent.

If the Permittee makes process or material changes which, in the Department's opinion, results in an increased potential for effluent toxicity, then the Department may require additional effluent characterization in a regulatory order, by permit modification, or in the permit renewal. Toxicity is assumed to have increased if WET testing conducted for submission with a permit application fails to meet the performance standards in WAC 173-205-020, "whole effluent toxicity performance standard". The Permittee may demonstrate to the Department that changes have not increased effluent toxicity by performing additional WET testing after the time the process or material changes have been made.

HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (40 CFR 131.36.).

The Department has determined that the applicant will not discharge additional chemicals of concern based on existing data or knowledge. The discharge will be re-evaluated for impacts to human health at the next permit reissuance.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the Sediment Management Standards.

STORMWATER QUALITY LIMITATIONS

The Mint Farm's NPDES permit will also provide coverage for industrial stormwater discharge requirements. Therefore, the requirements for limits for pH, Oil and Grease, and a stormwater pollution prevention plan and associated Best Management Practices will be included in the NPDES permit. The pH, and oil and grease will have a minimum monitoring frequency of once per quarter, and will be collected by a grab sample. The average day limit for pH will be within the range of 6.0 to 9.0. The limit for oil and grease will be an average day limit of 10 mg/L and a daily maximum of 15 mg/L and no visible sheen. Since the stormwater eventually discharges to a 303(d) listed waterbody- the Longview Ditches, the Mint Farm facility will be required to conduct quarterly monitoring for turbidity. The Longview Ditches are listed for dissolved oxygen, fecal coliform, lead, and turbidity. Of these, turbidity is the only parameter of concern from the projected stormwater discharge from this facility.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, significance of pollutants, and cost of monitoring.

LAB ACCREDITATION

With the exception of certain parameters the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall, sanitary sewer outfall, or through a stormwater outfall for clean water, require the wastewater to be placed through the facilities wastewater treatment process or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

OPERATION AND MAINTENANCE MANUAL

In accordance with state and federal regulations, the Permittee is required to take all reasonable steps to properly operate and maintain the treatment system (40 CFR 122.41(e)) and WAC 173-220-150 (1)(g). An operation and maintenance manual will be submitted as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). It has been determined that the

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implementation of the procedures in the Operation and Maintenance Manual is a reasonable measure to ensure compliance with the terms and limitations in the permit.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that this proposed permit be issued effective until July 2006, to mesh with the basin wide schedule for permit renewals in the Longview area. This will constitute a period of slightly less than 5 years, while 5 years is the standard permit issuance period.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

40 CFR 131.36. National Toxics Rule.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

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Washington State Department of Ecology.

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APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department of Ecology drafted a wastewater discharge Permit, in accordance with established procedures and standards in state and federal water quality regulations, to the applicant listed on page 1 of this Fact Sheet. The Permit allows the applicant-facility operator to discharge named wastes into the State's water(s) under certain Conditions. Those Conditions prescribe performance requirements, effluent limitations, water quality standards, and pollution control technologies. The bases for those Permit Conditions are state and federal pollution control rules -described in the accompanying Fact Sheet. the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department of Ecology distributed a Public Notice about the Mint Farm Generation project, last July 15, 2005. The Notice outlined the National Pollutant Discharge Elimination System Permit's purpose and invited public evaluation and comment of the draft NPDES Permit. We distributed the Notice through electronic and postal mail, and published it in Longview's *The Daily News*. The Notice informed the reader where to find a printed copy of the draft Permit and Fact Sheet, gave the website from which the reader could download and read a copy, and told where to submit comments about the Permit's waste discharge limits, monitoring frequency, and reporting requirements.

The Notice directed readers to send their written comments to:

Marc Crooks, P.E.
Department of Ecology
Industrial Section
P. O. Box 47706
Olympia, WA 98504-7600

The Public Notice advised the reader that the thirty-day Public Comment Period ended August 15, 2005.

The Permit and Fact Sheet were written by Marc E. Crooks, Environmental Engineer. In addition to soliciting written comments about the draft Permit, the Notice published contact information so people could telephone or e-mail the engineer to ask technical questions about the Mint Farm Generation's pollution control systems.

During the Public Comment Period, Ecology performed an internal review of the draft NPDES Permit to ensure that it addressed technical issues, to verify the accuracy and completeness of factual information about the applicant-facility, and to confirm the scope of the facility's proposed coverage and adequacy of environmental protection.

After the thirty-day Public Comment Period ended, Ecology's professional staff considered each (internal and external) comment received within thirty (30) days from the date of Public Notice. Ecology weighed all of the comments, in formulating the specific text for Conditions and Requirements of this NPDES Permit. Based upon those comments, upon the Department of Ecology's delegated authority from the federal Environmental Protection Agency, and upon the duty imposed by Washington's legislature, the Department of Ecology determined it will issue this Permit.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring --Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--RESPONSE TO COMMENTS

The Department of Ecology received one “public” comment about the NPDES Permit we proposed for Mint Farm Generation, LLC. The comment was submitted by Lincoln Loehr of Heller Ehrman, LLP.

The comment was:

As we have discussed today by phone, this comment is one that I would like you to take up with those in your department who develop the boilerplate language used for the General conditions in NPDES permits. My comment goes to Condition G3. The general condition appears to have been greatly simplified from language used in earlier permits. In the process of simplifying, it also appears to have lost some flexibility and become an absolute, in a manner that I do not believe matches how Ecology has implemented the NPDES program in the past, or how they really intend to implement it in the future.

Condition G3 says that:

“The Department shall modify, suspend, or terminate this Permit –in whole or in part—for any of the following causes:

- A. Violation of any permit term or condition;
- B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;
- C. A material change in quantity or type of waste disposal;
- D. A material change in the condition of the waters of the State; or
- E. Nonpayment of fees assessed pursuant to RCW 90.48.465.”

My concern is that the word “shall” is an absolute, and you should replace it with “may”.

It has never been, and never should be the Department’s policy to modify, suspend, or terminate permits because of a violation of any permit term or condition. I can provide you with numerous permit fact sheets that describe a facility’s compliance history, and violations have occurred without the Department modifying, suspending, or terminating permits. Granted, some violations can and should warrant actions by Ecology, but many do not require actions as intensive as described in the new general permit language.

Note that a material change in the condition of the waters of the State is not, by itself, a sufficient basis to require such actions. Sometimes a material change is an improvement. Sometimes a material change has nothing to do with a discharger. If water temperatures rise due to global warming, Condition G3 would require the Department to modify, suspend, or terminate all NPDES permits.

Use “may” instead of “shall.” Allow the Department to exercise its judgment in deciding when the possible actions are warranted.

I hope that those who deal with the general permit language can provide a response in time to issue the final permit.

Ecology response:

We agree with the comment and thus changed the word from “shall” to “may” in Permit Condition G3. Also, the Industrial Section forwarded the comment to Ecology’s Water Quality Program where the general permit language is developed.